Claims

What is claimed is:

1. A method for performing operations in a graphics system, wherein the graphics system includes a plurality of calculation pipelines, the method comprising:

determining if a first calculation pipeline is performing a low latency operation;

if the first calculation pipeline is performing a low latency operation, then providing a next operation to the first calculation pipeline; and

if the first calculation pipeline is performing a high latency operation, then providing the next operation to a second calculation pipeline.

2. The method of claim 1,

wherein the plurality of calculation pipelines receives operations in a pre-determined manner; and

wherein the second calculation pipeline is a next calculation pipeline after the first calculation pipeline in the pre-determined manner.

3. The method of claim 1,

wherein the plurality of calculation pipelines receives operations in a pre-determined sequence; and

wherein the second calculation pipeline is operable to receive an operation subsequent to the first calculation pipeline according to the pre-determined sequence.

4. The method of claim 1,

wherein the second calculation pipeline is a currently available calculation pipeline.

5. The method of claim 1,

wherein the second calculation pipeline is currently performing a low latency operation.

6. The method of claim 1, further comprising:

determining if the second calculation pipeline is performing a low latency operation;

if the second calculation pipeline is performing a low latency operation, then providing a subsequent operation to the second calculation pipeline; and

if the second calculation pipeline is performing a high latency operation, then providing the subsequent operation to a third calculation pipeline.

7. The method of claim 1,

wherein the plurality of calculation pipelines is operable to receive geometric primitive information and compute polygons based on the geometric primitive information.

8. The method of claim 7,

wherein the geometric primitive information comprises vertex information; and

wherein the plurality of calculation pipelines is operable to compute slopes based on the vertex information.

9. The method of claim 1,

wherein each of the calculation pipelines includes digital logic for performing the graphics operations.

10. The method of claim 1,

wherein each of the calculation pipelines includes a processor for performing the graphics operations.

11. The method of claim 1,

wherein a low latency operation comprises an operation that is performable by one of the calculation pipelines in less than a pre-determined number of cycles.

12. The method of claim 11,

wherein a high latency operation comprises an operation that is performable by one of the calculation pipelines in greater than the pre-determined number of cycles.

13. The method of claim 11,

wherein a high latency operation comprises an operation that requires greater than the pre-determined number of cycles to be performed by one of the calculation pipelines.

14. The method of claim 1,

wherein a low latency operation comprises an operation that is performable by one of the calculation pipelines in less than a first pre-determined number of cycles; and

wherein a high latency operation comprises an operation that is performable by one of the calculation pipelines in greater than a second pre-determined number of cycles.

15. The method of claim 14,

wherein the first pre-determined number of cycles is the same as the second pre-determined number of cycles.

16. A method for performing operations in a graphics system, wherein the graphics system includes a plurality of calculation pipelines, the method comprising:

determining if a first calculation pipeline is performing a low latency operation;

providing a next operation to the first calculation pipeline if said determining determines that the first calculation pipeline is performing a low latency operation; and

providing the next operation to a second calculation pipeline if said determining determines that the first calculation pipeline is performing a high latency operation.

17. A graphics system, comprising:

a plurality of calculation pipelines, wherein each of the calculation pipelines is operable to perform a graphics operation; and

an arbitration unit coupled to each of the plurality of calculation pipelines, wherein the arbitration unit is operable to provide graphics operations to selected ones of the plurality of calculation pipelines, wherein the arbitration unit is operable to:

determine if a first calculation pipeline is performing a low latency operation;

provide a next operation to the first calculation pipeline if said determining determines that the first calculation pipeline is performing a low latency operation; and

provide the next operation to a second calculation pipeline if said determining determines that the first calculation pipeline is performing a high latency operation.

18. The graphics system of claim 17,

wherein the arbitration unit is operable to provide operations to the plurality of calculation pipelines in a pre-determined manner; and

wherein the second calculation pipeline is a next calculation pipeline after the first calculation pipeline in the pre-determined manner.

19. The graphics system of claim 17,

wherein the second calculation pipeline is a currently available calculation pipeline.

20. The graphics system of claim 17,

wherein the second calculation pipeline is currently performing a low latency operation.

21. The graphics system of claim 17,

wherein the arbitration unit is further operable to:

determine if the second calculation pipeline is performing a low latency operation;

provide a subsequent operation to the second calculation pipeline if the second calculation pipeline is performing a low latency operation; and

provide the subsequent operation to a third calculation pipeline if the second calculation pipeline is performing a high latency operation.

22. The graphics system of claim 17,

wherein the plurality of calculation pipelines is operable to receive geometric primitive information and compute polygons based on the geometric primitive information.

23. The graphics system of claim 22,

wherein the geometric primitive information comprises vertex information; and

wherein the plurality of calculation pipelines is operable to compute slopes based on the vertex information.

24. The graphics system of claim 17,

wherein each of the calculation pipelines includes digital logic for performing the graphics operations.

25. The graphics system of claim 17,

wherein each of the calculation pipelines includes a processor for performing the graphics operations.

26. The graphics system of claim 17,

wherein a low latency operation comprises an operation that is performable by one of the calculation pipelines in less than a pre-determined number of cycles.

27. The graphics system of claim 26,

wherein a high latency operation comprises an operation that is performable by one of the calculation pipelines in greater than the pre-determined number of cycles.

28. A graphics system, comprising:

a media processor;

a render pipeline connected to the media processor;

a plurality of calculation pipelines within the render pipeline, wherein each of the calculation pipelines is operable to perform a graphics operation; and

an arbitration unit coupled to each of the calculation pipelines, wherein the arbitration unit is operable to provide graphics operations to selected ones of the calculation pipelines, wherein the arbitration unit is operable to:

determine if a first calculation pipeline is performing a low latency operation;

provide a next operation to the first calculation pipeline if said determining determines that the first calculation pipeline is performing a low latency operation; and

provide the next operation to a second calculation pipeline if said determining determines that the first calculation pipeline is performing a high latency operation.